

SEQUENCE LISTING

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 ICAgen, Inc.

<120> BK Beta Subunits of Slo Family Potassium Channels

<130> 018512-002030US

<140> US 09/914,053

<141> Not yet assigned

<150> US 60/121,224

<151> 1999-02-23

<150> US 60/163,367

<151> 1999-11-03

<150> WO PCT/US00/04441

<151> 2000-02-22

<160> 19

<170> PatentIn Ver. 2.1

<210> 1

<211> 257

<212> PRT

<213> Homo sapiens

<220>

<223> BK beta 2

<400> 1

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Asp	Gly	Asp	Pro	Leu	Asp	Val	His	Lys	Arg	Leu	Pro	Ser	Ser	Thr	Gly
			20					25					30		
Glu	Asp	Arg	Ala	Val	Met	Leu	Gly	Phe	Ala	Met	Met	Gly	Phe	Ser	Val
		35					40					45			
Leu	Met	Phe	Phe	Leu	Leu	Gly	Thr	Thr	Ile	Leu	Lys	Pro	Phe	Met	Leu
	50					55					60				
Ser	Ile	Gln	Arg	Glu	Glu	Ser	Thr	Cys	Thr	Ala	Ile	His	Thr	Asp	Ile
65					70					75					80
Met	Asp	Asp	Trp	Leu	Asp	Cys	Ala	Phe	Thr	Cys	Gly	Val	His	Cys	His
				85					90					95	
Gly	Gln	Gly	Lys	Tyr	Pro	Cys	Leu	Gln	Val	Phe	Val	Asn	Leu	Ser	His
			100					105					110		
Pro	Gly	Gln	Lys	Ala	Leu	Leu	His	Tyr	Asn	Glu	Glu	Ala	Val	Gln	Ile
			115				120					125			

Asn Pro Lys Cys Phe Tyr Thr Pro Lys Cys His Gln Asp Arg Asn Asp
 130 135 140
 Leu Leu Asn Ser Ala Leu Asp Ile Lys Glu Phe Phe Asp His Lys Asn
 145 150 155 160
 Gly Thr Pro Phe Ser Cys Phe Tyr Ser Pro Ala Ser Gln Ser Glu Asp
 165 170 175
 Val Ile Leu Ile Lys Lys Tyr Asp Gln Met Ala Ile Phe His Cys Leu
 180 185 190
 Phe Trp Pro Ser Leu Thr Leu Leu Gly Gly Ala Leu Ile Val Gly Met
 195 200 205
 Val Arg Leu Thr Gln His Leu Ser Leu Leu Cys Glu Lys Tyr Ser Thr
 210 215 220
 Val Val Arg Asp Glu Val Gly Gly Lys Val Pro Tyr Ile Glu Gln His
 225 230 235 240
 Gln Phe Lys Leu Cys Ile Met Arg Arg Ser Lys Gly Arg Ala Glu Lys
 245 250 255

Ser

<210> 2
 <211> 774
 <212> DNA
 <213> Homo sapiens

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 ttgccatga tgggcttctc agtcctaagt ttcttcttgc tcggaacaac cattctaaag 180
 ccttttatgc tcagcattca gagagaagaa tcgacctgca ctgccatcca cacagatatc 240
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 taccctgtgc ttcaggtgtt tgtgaacctc agccatccag gtcagaaagc tctcctacat 360
 tataatgaag aggctgtcca gataaatccc aagtgccttt acacacctaa gtgccaccaa 420
 gatagaaatg atttgctcaa cagtgcctctg gacataaaag aattcttcga tcacaaaaat 480
 ggaaccccct tttcatgctt ctacagtcca gccagccaat ctgaagatgt cattcttata 540
 aaaaagtatg accaaatggc tatcttccac tgtttatattt ggccttcact gactctgcta 600
 ggtggtgccc tgattgttgg catggtgaga ttaacacaac acctgtcctt actgtgtgaa 660
 aaatatagca ctgtagtcag agatgaggta ggtggaaaag taccttatat agaacagcat 720
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<210> 3
 <211> 203
 <212> PRT
 <213> Homalozoon vermiculare

<220>
 <223> BK beta 3

<400> 3

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 20 25 30

Phe Ile Phe Gly Phe Cys Trp Leu Ser Pro Ala Leu Gln Asp Leu Gln
 35 40 45

Ala Thr Glu Ala Asn Cys Thr Val Leu Ser Val Gln Gln Ile Gly Glu
 50 55 60

Val Phe Glu Cys Thr Phe Thr Cys Gly Ala Asp Cys Arg Gly Thr Ser
 65 70 75 80

Gln Tyr Pro Cys Val Gln Val Tyr Val Asn Asn Ser Glu Ser Asn Ser
 85 90 95

Arg Ala Leu Leu His Ser Asp Glu His Gln Leu Leu Thr Asn Pro Lys
 100 105 110

Cys Ser Tyr Ile Pro Pro Cys Lys Arg Glu Asn Gln Lys Asn Leu Glu
 115 120 125

Ser Val Met Asn Trp Gln Gln Tyr Trp Lys Asp Glu Ile Gly Ser Gln
 130 135 140

Pro Phe Thr Cys Tyr Phe Asn Gln His Gln Arg Pro Asp Asp Val Leu
 145 150 155 160

Leu His Arg Thr His Asp Glu Ile Val Leu Leu His Cys Phe Leu Trp
 165 170 175

Pro Leu Val Thr Phe Val Val Gly Val Leu Ile Val Val Leu Thr Ile
 180 185 190

Cys Ala Lys Ser Leu Ala Val Lys Ala Glu Arg
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<210> 4

<211> 612

<212> DNA

<213> Homo sapiens

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<223> BK beta 3

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 cagatcggcg aggtgttcga gtgcaccttc acctgtggcg ccgactgcag gggcacctcg 240
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 agagaaaatc agaagaattt ggaaagtgtc atgaattggc aacagtactg gaaagatgag 420
 attggttccc agccatttac ttgctatttt aatcaacatc aaagaccaga tgatgtgctt 480
 ctgcacgcga ctcattgatg gattgtcctc ctgcattgct tctctggcc cctgggtgaca 540
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<210> 5
 <211> 235
 <212> PRT
 <213> Homo sapiens

<220>
 <223> BK beta 4

<400> 5
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 35 40 45
 Leu Leu Gly Leu Ala Met Met Val Cys Ser Ile Met Met Tyr Phe Leu
 50 55 60
 Leu Gly Ile Thr Leu Leu Arg Ser Tyr Met Gln Ser Val Trp Thr Glu
 65 70 75 80
 Glu Ser Gln Cys Thr Leu Leu Asn Ala Ser Ile Thr Glu Thr Phe Asn
 85 90 95
 Cys Ser Phe Ser Cys Gly Pro Asp Cys Trp Lys Leu Ser Gln Tyr Pro
 100 105 110
 Cys Leu Gln Val Tyr Val Asn Leu Thr Ser Ser Gly Glu Lys Leu Leu
 115 120 125
 Leu Tyr His Thr Glu Glu Thr Ile Lys Ile Asn Gln Lys Cys Ser Tyr
 130 135 140
 Ile Pro Lys Cys Gly Lys Asn Phe Glu Glu Ser Met Ser Leu Val Asn
 145 150 155 160
 Val Val Met Glu Asn Phe Arg Lys Tyr Gln His Phe Ser Cys Tyr Ser
 165 170 175
 Asp Pro Glu Gly Asn Gln Lys Ser Val Ile Leu Thr Lys Leu Tyr Ser
 180 185 190
 Ser Asn Val Leu Phe His Ser Leu Phe Trp Pro Thr Cys Met Met Ala
 195 200 205
 Gly Gly Val Ala Ile Val Ala Met Val Lys Leu Thr Gln Tyr Leu Ser
 210 215 220
 Leu Leu Cys Glu Arg Ile Gln Arg Ile Asn Arg
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<210> 6
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<223> BK beta 4

<400> 6

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aaggcaggag aggaccgagc tattctcctg ggactggcta tgatgggtgtg ctccatcatg 180
atgtattttc tgctgggaat cacactcctg cgctcataca tgcagagcgt gtggaccgaa 240
gagtctcaat gcaccttgct gaatgcgtcc atcacggaaa catttaaytg ctccttcagc 300
tgtgggtccag actgctggaa actttctcag taccctgcc tccagggtgta cgtaaacctg 360
acttcttccg gggaaaagct cctcctctac cacacagaag agacaataaa aatcaatcag 420
aagtgtcctc atatacctaa atgtggaaaa aattttgaag aatccatgtc cctgggtgaat 480
gttgtcatgg aaaacttcag gaagtatcaa cacttctcct gctattctga cccagaagga 540
aaccagaaga gtgttatcct aacmaaactc tacagttcca acgtgctgtt ccattcactc 600
ttctggccaa cctgtatgat ggctgggggt gtggcaattg ttgccatggt gaaacttaca 660
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<210> 7

<211> 27

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:primer to
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<400> 7

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<210> 8

<211> 29

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:primer to
amplify BK beta 2

<400> 8

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<210> 9

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:primer to
amplify BK beta 2

<400> 9

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<210> 10

<211> 27

<212> DNA

<213> Artificial Sequence

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 <210> 11
 <211> 27
 <212> DNA
 <213> Artificial Sequence

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 <400> 11
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 <210> 12
 <211> 24
 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence:primer to
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 <400> 12
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 <210> 13
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:primer to
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 <400> 13
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 <210> 14
 <211> 25
 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence:primer to
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 <400> 14
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<210> 15
 <211> 25
 <212> DNA
 <213> Artificial Sequence

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<223> Description of Artificial Sequence:primer to
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<400> 15
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25

<210> 16
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer to
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<400> 16
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27

<210> 17
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer to
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<400> 17
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25

<210> 18
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer to
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<400> 18
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<210> 19
 <211> 191
 <212> PRT
 <213> Homo sapiens

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Ile	Leu	Val 35	Thr	Thr	Val	Leu	Pro 40	Leu	Tyr	Gln	Lys 45	Ser	Val	Trp	Thr
Gln	Glu 50	Ser	Lys	Cys	His	Leu 55	Ile	Glu	Thr	Asn	Ile 60	Arg	Asp	Gln	Glu
Glu 65	Leu	Lys	Gly	Lys	Lys 70	Val	Pro	Gln	Tyr	Pro 75	Cys	Leu	Trp	Val	Asn 80
Val	Ser	Ala	Ala	Gly 85	Arg	Trp	Ala	Val	Leu 90	Tyr	His	Thr	Glu	Asp 95	Thr
Arg	Asp	Gln	Asn 100	Gln	Gln	Cys	Ser	Tyr	Ile 105	Pro	Gly	Ser	Val	Asp 110	Asn
Tyr	Gln	Thr 115	Ala	Arg	Ala	Asp	Val	Glu	Lys 120	Val	Arg	Ala 125	Lys	Phe	Gln
Glu 130	Gln	Gln	Val	Phe	Tyr	Cys 135	Phe	Ser	Ala	Pro	Arg 140	Gly	Asn	Glu	Thr
Ser 145	Val	Leu	Phe	Gln	Arg 150	Leu	Tyr	Gly	Pro	Gln 155	Ala	Leu	Leu	Phe	Ser 160
Leu	Phe	Trp	Pro	Thr 165	Phe	Leu	Leu	Thr	Gly 170	Gly	Leu	Leu	Ile	Ile 175	Ala
Met	Val	Lys	Ser 180	Asn	Gln	Tyr	Leu	Ser 185	Ile	Leu	Ala	Ala	Gln 190	Lys	